

--9--

REMARKS

Claims 1-40 are currently pending in the application. By this amendment, claim 18 is amended for the Examiner's consideration. The above amendment does not add new matter to the application and is fully supported by the specification. For example, support for the amendment is provided at pages 10 – 11 of the specification.

Reconsideration of the rejected claims in view of the above amendment and the following remarks is respectfully requested.

35 U.S.C. §102 Rejection

Claims 1-40 were rejected under 35 U.S.C. §102(e) for being anticipated by U.S. Patent No. 7,213,065 issued to Watt ("Watt"). This rejection is respectfully traversed.

In accordance with the guidelines set forth in MPEP 2131:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Applicants submit that the reference applied by the Examiner does not show each and every feature of the claimed invention.

Examiner Did Not Properly Reject Claims 1, 19-22, 24, 26, 30, 33, and 35-36

Applicants note that the Examiner did not address the features of independent claims 1 and 24, hence, the Examiner did not properly reject independent claims 1 and 24 as being anticipated by Watt under 35 U.S.C. § 102(e). Specifically, the Examiner has listed the features of independent claim 18 to make a single rejection of independent claims 1, 18, and 24 under 35 U.S.C. §102(e). However, the Examiner does not appear to consider the specific features of independent claims 1 and 24, which include features that are clearly different than those features of independent claim 18.

--10--

For example, the Examiner has not even addressed the feature of routing a request to a virtual cluster of the plurality of virtual clusters based on predetermined criteria in order to allocate system resources. As such, the Examiner has not covered all of the features of independent claims 1 and 24. This being the case, Applicants submit that a clear issue was not developed between the Examiner and Applicants.

Furthermore, according to MPEP 707.07(e), a plurality of claims should never be grouped together in a common rejection, unless that rejection is equally applicable to all claims in the group. Applicants submit that the Examiner has frequently grouped together claims under a common rejection even though the claims include distinct features. For example, the Examiner has rejected claims 19-22, 26, 30, 33, and 35-36 without considering the features of the claims, some of which are clearly distinct from those features considered by the Examiner. Therefore, the next Office Action, which should clarify this issue, *cannot* be made final.

According to MPEP 706,

Before final rejection is in order a clear issue should be developed between the examiner and applicant. To bring the prosecution to as speedy conclusion as possible and at the same time to deal justly by both the applicant and the public, the invention as disclosed and claimed should be thoroughly searched in the first action and the references fully applied; and in reply to this action the applicant should amend with a view to avoiding all the grounds of rejection and objection.

Additionally, MPEP 706.07(a) notes:

Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p). ...

Furthermore, a second or any subsequent action on the merits in any application ... will not be made final if it includes a rejection, on newly cited art, other than information submitted in an information disclosure statement filed under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17

-11-

(p), of any claim not amended by applicant or patent owner in spite of the fact that other claims may have been amended to require newly cited art.

Accordingly, Applicants respectfully submit that the Examiner may not make the next action final, as in the previous Office Action a "clear issue [was not] developed between the examiner and applicant."

Claims 1 and 24

Claim 1 recites, in pertinent part:

... defining a plurality of virtual clusters from a plurality of servers;
and
routing a request to a virtual cluster of the plurality of virtual clusters based on predetermined criteria in order to allocate system resources.

Claim 24 recites, in pertinent part:

... define a plurality of virtual clusters from a plurality of servers;
and
route a request to a virtual cluster of the plurality of virtual clusters based on predetermined criteria to allocate system resources.

Applicants assert that Watt does not disclose the features of claims 1 and 24, which the Examiner did not address in the Office Action. Specifically, Applicants assert that Watt does not disclose the feature of routing a request to a virtual cluster of the plurality of virtual clusters based on predetermined criteria in order to allocate system resources. Instead, Watt includes a load manager 206, which receives a variety of inputs and allocates servers 308. This allocation of servers is done by issuing commands to a repository manager 210 in order to assign an instance 306 of the proper class 304 to the server. (Col. 11, lines 36-46.) The assigned instance is a server image consisting of software snapshots 302, which are installations of a piece of software. (Col. 8, lines 23-37.) Therefore, the load manager issues commands to a repository manager to assign software to a server. Watt does not route a request to a virtual

--12--

cluster of the plurality of virtual clusters based on predetermined criteria to allocate system resources.

Accordingly, Applicants respectfully request that the rejection over claims 1 and 24 be withdrawn.

Claim 18

Claim 18 recites, in pertinent part:

... allocating a plurality of servers among a plurality of virtual clusters;
monitoring the plurality of virtual clusters for workload capacity; and
reassigning at least one server from one of the plurality of virtual clusters to another of the plurality of virtual clusters based on workload capacity of the at least one server in order to reallocate system resources.

Applicants respectfully submit that Watt does not reassign at least one server from one of the plurality of virtual clusters to another of the plurality of virtual clusters based on workload capacity of the at least one server in order to reallocate system resources. Instead, Watt includes a collector process that calculates an average load across a server pool. (Col. 11, lines 18-24.) If the average load on the server pool falls below a threshold, then arbitrary servers are powered off and returned to the server pool. If the average load on the server pool exceed this threshold, then servers are arbitrarily allocated from the free server pool, provisioned with an appropriate system image, and powered on so they can join the server pool. (Table 2.) Therefore, Watt reassigns servers based on the average load on the server pool regardless of the load on any individual server. Hence, Watt does not reassign at least one server from one of the plurality of virtual clusters to another of the plurality of virtual clusters based on workload capacity of the at least one server in order to reallocate system resources.

Accordingly, Applicants respectfully request that the rejection over claim 18 be withdrawn.

-13--

Dependent Claims

Claims 2-17, 19-23, and 25-40 are dependent claims, depending on independent claims 1, 18, and 24. For this reason, Applicants submit that these claims are thus distinguishable based on independent claims 1, 18, and 24. Applicants submit that these claims also include subject matter which is distinguishable from Watt.

Claims 2 and 25

Claim 2 recites, in pertinent part:

... sending a report in response to workload at one of the plurality of servers exceeding a pre-determined threshold so that routing of further requests to the one of the plurality of servers is altered.

Claim 25 recites, in pertinent part:

... sends a report in response to workload at one of the plurality of servers exceeding a pre-determined threshold so that routing of further requests to the one of the plurality of servers is altered.

Applicants respectfully assert that Watt does not send a report in response to workload at one of the plurality of servers exceeding a pre-determined threshold so that routing of further requests to the one of the plurality of servers is altered. Instead, Watt includes a server monitor 204 having two processes: an emitter process and a collector process. (Col. 10, lines 63-67.) The emitter process includes a heartbeat signal, which monitors whether there has been a server failure, and a periodic signal, which provides a full load update. The collector process uses the information obtained from the heartbeat signal and the periodic signal to build an image of the server pool, which includes detecting when a server is added to or removed from a server pool. It also includes calculating the average load across each server pool. (Col. 11, lines 1-24.) This average load calculation is then sent to the load manager, which allocates load based on the average load for each server pool. (Col. 14, lines 45-50; Table 2.) Therefore, Watt considers the average load of a server pool when determining whether a minimum or maximum acceptable average load has been reached. Watt does not

--14--

send a report in response to workload at one of the plurality of servers exceeding a pre-determined threshold so that routing of further requests to the one of the plurality of servers is altered.

Accordingly, Applicants respectfully request that claims 2 and 25 are not anticipated.

Claims 5 and 28

Claim 5 recites, in pertinent part:

... determining that one of the plurality of servers is overburdened based on statistics; and
reducing workload to the one of the plurality of servers if the statistics are above a threshold.

Claim 28 recites, in pertinent part:

... determines that one of the plurality of servers is overburdened based on statistics; and
reduces workload to the one of a plurality of servers if the statistics are above a threshold.

Applicants respectfully submit that Watt does not determine that one of the plurality of servers is overburdened based on statistics and reduce workload to the one of a plurality of servers if the statistics are above a threshold. As discussed above, Watt calculates an average load across each server pool. If the load on the pool falls below a threshold, then arbitrary servers are powered off and returned to the pool. If the load on the pool exceed this threshold, then servers are arbitrarily allocated from the free pool, provisioned with an appropriate system image, and powered on so they can join the pool. (Table 2.) Therefore, Watt determines whether a server pool is overburdened and reduces workload on the server pool by powering off a server. Watt does not determine whether one of the plurality of servers is overburdened based on statistics and reduce workload to the one of a plurality of servers if the statistics are above a threshold.

-15--

Accordingly, Applicants respectfully request that claims 2 and 25 are not anticipated.

Claims 4 and 27

Claim 4 recites, in pertinent part:

... wherein the sending a report sends a report to a network dispatcher and the network dispatcher performs the routing.

Claim 27 recites, in pertinent part:

... wherein the at least one component sends a report to a network dispatcher and the network dispatcher performs the routing.

The Examiner asserts that Watt sends a report to a network dispatcher and the network dispatcher performs the routing. Applicants respectfully submit this is not the case. Watt includes a control console having an administrative interface, wherein data center personnel use the control console to create server images. The control console also provides an accounting and reporting function to assist in customer billing and long-term resource planning. Watt does not send a report to a network dispatcher and have the network dispatcher perform the routing.

Accordingly, Applicants respectfully request that claims 4 and 27 are not anticipated.

Claims 8 and 31

Claim 8 recites, in pertinent part:

... wherein at least one of the plurality of servers is assigned to more than one of the plurality of virtual clusters.

Claim 31 recites, in pertinent part:

... wherein the at least one component assigns at least one of the plurality of servers to more than one of the plurality of virtual clusters.

Applicants submit that Watt does not include the feature wherein at least one of the plurality of servers is assigned to more than one of the plurality of virtual clusters. Instead, Watt allows virtual clusters, i.e., server pools, to group servers together to

--16--

provide one or more services or applications. This means that servers may be grouped together to form virtual clusters, wherein separate servers are used for separate instances of ownership. For example, all of the servers owned by Customer1 are isolated in Cluster1 and all of the servers owned by Customer2 are isolated in Cluster2. (Col. 15, lines 30-37.) Applicants submit that isolating servers in a cluster is not the same as allowing at least one of the plurality of servers to be assigned to more than one of the plurality of virtual clusters.

Accordingly, Applicants respectfully request that claims 4 and 27 are not anticipated.

Claims 11 and 34

Claim 11 recites, in pertinent part:

... wherein the performance statistics include at least one of central processing unit (CPU) performance statistics, memory statistics, connection counts, throughput statistics, and response time statistics.

Claim 34 recites, in pertinent part:

... wherein the performance statistics include at least one of central processing unit (CPU) performance statistics, memory statistics, connection counts, throughput statistics, and response time statistics.

The Examiner asserts that Watt includes performance statistics comprising at least one of central processing unit (CPU) performance statistics, memory statistics, connection counts, throughput statistics, and response time statistics. To support this assertion the Examiner has relied on a passage in Watt that describes what a computer system is comprised of (e.g., a main memory, a random access memory, a hard disk drive, a removable storage drive, etc.). (Col. 18, lines 34-47; Fig. 5.) However, there is no indication that any of these components include performance statistics, much less CPU performance statistics, memory statistics, connection counts, throughput statistics, and response time statistics. Furthermore, Watt does not disclose these statistics and/or counts anywhere in the patent.

--17--

Accordingly, Applicants respectfully request that claims 11 and 34 are not anticipated.

Other Matters

Applicants submit that the Examiner did not properly reject claims as noted above. While stating that these claims were rejected, the Examiner never addressed the features of these claims as rejected by the combination of references as applied by the Examiner. For these reasons, Applicants submit that a clear issue was not developed between the Examiner and Applicants. As such, the next Office Action, which should clarify this issue, *cannot* be made final. (See MPEP 706 and 706.07(a), which are referenced above.)

Accordingly, Applicants respectfully submit that the Examiner may not make the next action final, as in the previous Office Action a "clear issue [was not] developed between the examiner and applicant".

CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicants hereby makes a written conditional petition for

--18--

extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 19-0089.

Respectfully submitted,



Andrew M. Calderon
Registration No. 38,093

Greenblum & Bernstein, P.L.C.
1950 Roland Clarke Place
Reston, Virginia 20191
Telephone: 703-716-1191
Facsimile: 703-716-1180